Red drum			
EFH identified from	eggs	M	tidal inlets, planktonic
NC - FL Keys	larvae	M	tidal inlets, planktonic
	postlarvae/juvenile	E	mud bottoms, SAV, marsh/water interface
	subadults	E	mud bottoms, oyster reef, mangrove
	adults	M/E	inlets & surf zone - 50 m; mud bottoms, oyster reefs

Red drum HAPC - tidal inlets & state nursery habitats, spawning sites & SAV

Snowy grouper			
EFH identified from	eggs/larvae	M	pelagic
NC - FL	adults	M	< 180 m, boulders & relief features
Yellowedge grouper			
EFH identified from	eggs/larvae	M	pelagic
NC - FL	adults	M	190 - 220 m, rocky outcrops & hardbottom
Warsaw grouper			
EFH identified from	eggs	M	pelagic
NC - FL Keys	adults	M	76 - 219 m, cliffs, notches & rocky ledges

Appendix 6 Continued.

Species	Life Stage	Ecosystem	EFH
Scamp			
EFH identified from NC - FL	adults	M	20 - 100 m, hardbottoms, rock outcrops

Appendix 6 Continued.

Species	Life Stage	Ecosystem	EFH
Golden tilefish			
EFH identified from NC - FL	adults	M	burrows in rough bottom; 76 - 457 m

Snapper-Grouper HAPC - hardbottom, mangrove, SAV, oyster/shell, inlets, state nursery areas,*Sargassum*, coral, The Point, Ten Fathom Ledge, & Big Rock (NC); Chalreston Bump (SC); Blake Plateau & Oculina Bank (FL); Hoyt Hills

King mackerel			
EFH identified from	juvenile	M	pelagic, S. Atlantic Bight
NC - FL	adults	M	pelagic, S. Atlantic Bight
Spanish mackerel			
EFH identified from	larvae	M	offshore <50 m
NC - FL	juvenile	M/E	offshore, beach, estuarine
	adults	M	pelagic
Cobia			
EFH identified from	eggs	M	pelagic
NC - FL	larvae	M/E	estuarine & shelf
	postlarvae/juvenile	M/E	estuarine & shelf
	adults	M/E	coastal & shelf
Dolphin			
EFH identified from	larvae	M	epipelagic, *Sargassum*
NC - FL	postlarvae/juvenile	M	epipelagic, *Sargassum*
	adults	M	epipelagic

Coastal Migratory Pelagic HAPC - Capes Lookout, Fear, & Hatteras sandy shoals; The Point, Ten Fathom Ledge, Big Rock (NC); Charleston Bump & Hurl Rocks (SC); The Point, The Hump, Marathon Hump, & The Wall (FL); worm reefs, hardbottom, *Sargassum*, Bogue Sound, New River, Broad River

Golden crab			
EFH identified from NC - FL	adults	M	mud, dead coral, pebble; 367 - 549 m
Spiny lobster			
EFH identified from	larvae	M/E	planktonic
FL	juvenile	M/E	sponge, algae, coral, hardbottom
	adults	M/E	sponge, algae, coral, hardbottom, crevices

Spiny lobster HAPC - Florida & Biscayne Bays, Card Sound, coral/hardbottom (Jupiter Inlet - Dry Tortugas)

Coral			
EFH identified from FL		M	N/A

Coral HAPC - Ten Fathom Ledge, Big Rock & The Point (NC); Hurl Rocks &Charleston Bump (SC); Gray's Reef NMS (GA); FL Keys NMS, Biscayne NP, Biscayne Bay, Oculina Banks & hardbottom/worm reefs (FL)

Calico scallops			
EFH identified from NC - FL	adults	M	shell, hard sand, gravel; 13 - 94 m

Appendix 7. Summary of EFH Requirements for Species Managed by the Mid-Atlantic Fishery Management Council.

Species	Life Stage	Ecosystem	EFH
Bluefish			
EFH identified from North Carolina - FL Keys	larvae	M	>15 m to Gulf Stream through Key West
	juveniles	E/M	as above and estuaries from Albemarle Sound, NC through St Johns River, FL
	adult	E/M	shore to Gulf Stream through Key West and estuaries from Albemarle Sound, NC through Indian River, FL
Spiny dogfish			
EFH identified from NC - FL	juvenile	M	shelf waters from 10 - 400 m
	adult	M	shelf waters from 10 - 450 m
Summer flounder			
EFH identified from NC - GA Sounds	larvae/juvenile	E/M	shelf waters and estuaries from Albemarle Sound, NC through St. Andrew/Simon
	adult	E/M	as above

Submerged aquatic vegetation is HAPC for larval and juvenile summer flounder.

Appendix 8. Summary of EFH Requirements for High Migratory Species Managed by the National Marine Fisheries Service.

South Atlantic Species	Life Stage	EFH
Offshore		
Albacore tuna	adult	Blake Plateau & Spur area (FL), >100 m isobath
Atlantic bigeye tuna	Juvenile/adult	same as above
Atlantic bluefin tuna	Eggs/larvae	nearshore to 200 m isobath
	Juvenile/subadult	nearshore, S of 27° N
	Adults	as above and Blake Plateau
Atlantic skipjack tuna	Eggs/larvae	S of 28.25° N, 200 m isobath to EEZ
	Juvenile to adult	as above, 25 - 200 m isobath
Atlantic yellowfin tuna	Eggs/larvae	S of 28.25° N, 200 m isobath to EEZ
	Juvenile to adult	N of 31° N, 500 to 2000 m isobath; Blake Plateau
Swordfish	Eggs/larvae	S of Hatteras, 200 m isobath to EEZ
	Juvenile/subadult	S to 31.5° N, 25 - 2000 m isobath, and S of 29° N from100 m to EEZ
	Adults	100 to 2000 m isobath or EEZ
Blue marlin	Eggs/larvae	S of 29.5° N, 100 m isobath to EEZ
	Juvenile	S to 30.75° N and S of 30° N, 200 to 2000 m isobath or EEZ
	Adult	S to 33.5° N, 100 - 2000 m; 32° to 30.75° N, 100 m to 78° W; and S of 29.5° N, 100 m to 50 mi. or EEZ
White marlin	Juvenile	S to 25.25° N, 200 - 2000 m isobath (EEZ off FL)

Appendix 8 Continued.

South Atlantic Species	Life Stage	EFH
Offshore		
Oceanic whitetip shark	Early juvenile	Charleston Bump
	Late juvenile	32° to 26° N, 200 m to EEZ
	Adult	36° to 30° N, 200 m to EEZ
Bigeye thresher shark	All stages	36.5° to 34° N, 200 - 2000 m isobaths
Coastal/Inshore Species		
Florida Only		
Great hammerhead shark	Juvenile/adult	coastal waters to 100 m, S of 30° N
Nurse shark	Juvenile/adult	S of 30.5° N, shoreline to 25 m isobath
Blacktip shark	Juvenile	S to 28.5° N, coastal waters to 25 m isobath
	Adult	Outer Banks, NC, shore to 200 m; 30° to 28.5° N, coastal waters to 50 m isobath
Florida - Georgia		
Bull shark	Juvenile	S of 32° N, inlets, estuaries, waters < 25 m FL
Florida - South Carolina		
Lemon shark	Juvenile	Bull's Bay, SC to 28° N & S of 25.5° N, inlets, estuaries, waters < 25 m
	Adult	31° to 30° N & S of 27° N, inlets, estuaries, waters < 25 m
Blacknose shark	Juvenile	SC - Cape Canaveral, to 25 m

	Adult	St. Augustine to Canaveral, FL, coastal water to 25 m
Finetooth shark	All stages	33° to 30° N, coastal waters to 25 m
Florida - North Carolina		
Scalloped hammerhead shark	Juvenile	shoreline to 200 m isobath
	Adults	S to 28° N, 25 - 200 m isobaths
Dusky shark	Juvenile	S to 33° N and S of 30° N, inlets, estuaries, waters < 200 m
	Adult	S to 28° N, 25 to 200 m isobaths
Sandbar shark	Juvenile	S to 27.5° N, coastal waters to 25 m
	Adult	coastal waters to 50 m.

HAPC for this species identified for Pamlico Sound adjacent to Hatteras and Ocracoke Islands and offshore.

Spinner shark	Early juvenile	S of 32.25° N, coastal waters to 25 m
	Juvenile/adult	30.7° to 28.5° N, coastal waters to 200 m
Tiger shark	Early juvenile	S to Canaveral, coastal waters to 200 m
	Late juvenile	shore to 100 m, except GA to Cape Lookout, where EFH is between 25 - 100 m
	Adult	S to Ft Lauderdale, coastal to Gulf Stream
Sand tiger shark	Juvenile	S to Cape Canaveral, coastal water to 25 m
	Adult	St. Augustine to Canaveral, FL, coastal water to 25 m

Appendix 8 Continued.

South Atlantic Species	Life Stage	EFH
Florida - North Carolina		
Bonnethead shark	Juvenile	Cape Fear NC to W. Palm Beach FL, inlets, estuaries, waters <25 m
	Adult	Cape Fear NC - Cape Canaveral FL, inlets, estuaries & shallow coastal waters
Atlantic sharpnose shark	Juvenile	Daytona Beach - Cape Hatteras, bays and waters to 25 m
	Adult	NC & St. Augustine - C. Canaveral, to 100 m isobath

Appendix 9. Sources of EFH and Related Resource Information.

Fishery Management Plan Amendments

Mid-Atlantic Fishery Management Council. 1998. Amendment 1 to the bluefish fishery management plan. Mid-Atlantic Fishery Management Council. Dover, DE. 2 vols.

Mid-Atlantic Fishery Management Council. 1998. Amendment 8 to the Atlantic mackerel, squid, and butterfish fishery management plan. Mid-Atlantic Fishery Management Council. Dover, DE.

Mid-Atlantic Fishery Management Council. 1998. Amendment 12 to the Atlantic surfclam and ocean quahog fishery management plan. Mid-Atlantic Fishery Management Council. Dover, DE.

Mid-Atlantic Fishery Management Council. 1998. Amendment 12 to the summer flounder, scup, and black sea bass fishery management plan. Mid-Atlantic Fishery Management Council. Dover, DE.

National Marine Fisheries Service. 1999. Amendment 1 to the Atlantic billfish fishery management plan amendment. National Marine Fisheries Service. Silver Spring, MD.

National Marine Fisheries Service. 1999. Fishery management plan for Atlantic tunas, swordfish, and sharks. National Marine Fisheries Service. Silver Spring, MD. 2 vols.

South Atlantic Fishery Management Council. 1998. Final habitat plan for the South Atlantic region: Essential Fish Habitat requirements for Fishery Management Plans of the South Atlantic fishery Management Council: The Shrimp Fishery Management Plan, The Red Drum Fishery Management Plan, The Snapper Grouper Fishery Management Plan, The Coastal Migratory Pelagics Fishery Management Plan, The Golden Crab Fishery Management Plan, The Spiny Lobster Fishery Management Plan, The Coral, Coral Reefs, and Live/Hard Bottom Habitat Fishery Management Plan, and The Calico Scallop Fishery Management Plan. South Atlantic Fishery Management Council. Charleston, SC.

EFH Related Web Sites

South Atlantic FMC & EFH amendment	http://www.safmc.noaa.gov
Mid-Atlantic FMC	http://www.mafmc.org/mid-atlantic/mafmc.htm
EFH Rules	http://www.nmfs.noaa.gov/habitat/efh
NMFS Southeast Region	http://caldera.sero.nmfs.gov
Highly migratory pelagic and billfish EFH amendments	http://www.nmfs.noaa.gov/sfa/hms/Final.html

Appendix 10. Points of Contact for Essential Fish Habitat Activities from North Carolina through Florida along the South Atlantic Coastal Area.

National Marine Fisheries Service
Southeast Region

Andreas Mager, Jr. (Asst Regional Administrator)
National Marine Fisheries Service
9721 Executive Center Drive, N.
St. Petersburg, FL 33702
727/570-5317 andy.mager@noaa.gov

Rickey Ruebsamen (EFH Coordinator)
National Marine Fisheries Service
9721 Executive Center Drive, N.
St. Petersburg, FL 33702
727/570-5317 ric.ruebsamen@noaa.gov

Local Office

David Rackley (North/South Carolina, Georgia, Florida East Coast)
National Marine Fisheries Service
Charleston Laboratory
219 Fort Johnson Road
Charleston, SC 29412-9110
(843) 762-8574 david.rackley@noaa.gov

Executive Director
South Atlantic Fishery Management Council
1 Southpark Circle
Southpark Building, Suite 306
Charleston, SC 29407-4699
843/571-4366 safmc@noaa.gov

EFH Point of Contact

Roger Pugliese
843/571-4366 roger.pugliese@noaa.gov

Mid-Atlantic Fishery Management Council

Executive Director
Mid-Atlantic Fishery Management Council
Room 2115, Federal Building
Dover, Delaware 19901

EFH Point of Contact

Thomas B. Hoff
302/674-2331 x15 tom.hoff@noaa.gov

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • FL WATS 1-800-432-2045 • TDD (561) 697-2574
Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680 • www.sfwmd.gov

CON 24-06

Environmental Resource Regulation

November 7, 2002

Mr. George Feher
URS Corporation
7650 West Courtney Campbell Causeway
Tampa, Florida 33607-1462

Dear Mr.Feher:

SUBJECT: Key West International Airport Runway Safety Area, Monroe County

The staff has reviewed the information provided during the October 8, 2002 meeting held at the South Florida Water Management District (District) office in West Palm Beach regarding the above-referenced project. The project site is located within, or adjacent to Outstanding Florida Waters, an Aquatic Preserve, an Area of Critical State Concern and is proposed to impact unique habitat within the Salt Pond area. The District offers the following comments regarding this proposal.

1. Prior to formally discussing mitigation options related to project development the applicant must demonstrate that avoidance and/or minimization of wetland impacts has been implemented to the greatest extent possible. The proposal presented during the October 8, 2002 meeting and indicated on the exhibits provided depict the standard Runway Safety Area (RSA) that the FAA desires to achieve. District staff is aware that the desired footprint for a RSA has flexibility (Ft. Lauderdale Airport) and may be reduced due to surrounding land uses and characteristics. District staff requests that the FAA define the least impactive alternative utilizing standard construction techniques.

2. Will additional lighting be required within the RSA? If so, please demonstrate that this lighting is down-shielded to ensure that light is retained within the boundaries of the site. Please be aware that any increased lighting will require that the effects of this lighting on wildlife be evaluated.

3. Development of the RSAs, as proposed, will directly impact sensitive mangrove, salt pond and herbaceous wetlands communities. Additionally, secondary impacts associated with the development, including buffer encroachments and fragmentation will require quantification. Cumulative impacts must be addressed as well. Also, numerous mitigation/environmental enhancement projects have been completed within the salt ponds. The salt pond area provides

unique wetland functions. Functions provided must be evaluated and a mitigation plan be developed within close proximity to the impact area designed to offset impacts to the functions provided by these wetland communities. Time lag and risk must be factored into any mitigation plan developed. What mitigation options have been identified to offset these direct, secondary and cumulative impacts?

4. District staff has concerns related to potential impacts to listed species, including migratory species that may be incurred with project development. Please provide the following information:

   A. ~~Please provide information relative to the potential impacts to internationally~~ migrating bird species that migrate yearly to/from the northern United States and Canada to/from the Caribbean, Central and South America. In addition, please provide any known information regarding the flight pattern(s) of the bird species that may utilize this area as part of their migratory route.

   B. Please provide information relative to the potential impacts to local wetland dependent species that migrate daily within the region. Please provide any known information regarding the flight pattern of wetland dependent bird species that may cross the area, specifically, birds utilizing identified colonial roosting and rookery sites and their known relationship to known wetland forage habitat.

   C. Please address any potential direct or secondary impacts to listed bird species resulting from the proposed project. Please identify how these impacts will be offset.

5. Additional impervious areas will require water quality treatment. Please identify the methods of water quality treatment, location for these facilities and identify additional wetland impacts resulting from the stormwater management areas.

6. How will proposed salt pond impacts effect groundwater recharge, storage, offsite impacts related to loss of storage and local hydrology?

The following comments relate specifically to potential alternative designs discussed at the October 8, 2002 meeting to address avoidance and/or minimization of wetland impacts.

7. District staff, during a previous meeting, was informed that larger jets are not proposed to be utilized at this location. However, several weeks ago Key West International Airport announced new direct-connect flights from out-of-state. Additionally, FAA stated during the meeting that they could not restrict or limit the flights or types of airlines utilizing this facility. If the runway safety area is constructed in accordance with the plan, what limitations could be placed on this facility to prevent the utilization of the RSA as a runway extension for larger or more fully loaded aircraft? In turn, what limitations could be imposed to ensure that future airport demands would not necessitate additional runway safety improvements?

8. Please provide an evaluation detailing the reasons why Marathon Airport could not be modified to provide the safety features desired while resulting in less impacts than the current proposal.

9. During the October 8, 2002 meeting privately owned structures/development where identified within the RSA. How will these facilities impact the ability for KWIA to effectively implement RSA improvements? It appears that hardened structures and development would be more damaging, both to the airlines and people located within the structures, than the vegetation proposed for destruction. Please define the flexibility FAA has in determining variances to their guidelines.

10. Discussions regarding the Engineering Materials Arresting Systems (EMAS) material utilization for aircraft safety indicated that this material would serve the safety function desired, could be placed in a much smaller area resulting in a minimization of wetland impacts and restrict the RSA from being used as a runway extension. FAA stated that, if damaged, the material was expensive to repair. Has consideration been given to passing this repair expense on to the air carrier causing the damage?

Should you have any questions, please call Ron Peekstok at 561-682-6956. Please include a copy of the enclosed "Transmittal Form for Requested Information" to each of the required copies of the requested information.

Sincerely,

Anita R. Bain

Anita R. Bain
Senior Supervising Environmental Analyst
~~Natural Resource Management Division~~

C: Monroe County – Ralph Gouldy
ACOE – Marathon, Miami
FDCA – Rebecca Jetton
FDEP – Ed Barham
NOAA, NMFS – St. Petersburg, Miami
FWS – Big Pine Key, Vero Beach

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Form 0970
08/95

APPLICANT TRANSMITTAL FORM FOR REQUESTED ADDITIONAL INFORMATION

(One copy of this form must be included with the 5 sets of information submitted concerning a pending permit application for an Environmental Resource, Surface Water Management or Water Use Permit.)

For submittal addresses, see page 2.

Application #:_____ ER☐ SW☐ WU☐

Project Name:_____

Project Location: County_____S_____/T_____/R____

Reviewer's Name:_____

Date:_____

Information included in response:	Additional	Revised
1. _____	☐	☐
2. _____	☐	☐
3. _____	☐	☐
4. _____	☐	☐
5. _____	☐	☐
6. _____	☐	☐
7. _____	☐	☐
8. _____	☐	☐
9. _____	☐	☐
10. _____	☐	☐

_____
Respondent Signature

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

November 15, 2002

George G. Fehér
URS Corporation
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462

Dear Mr. Fehér:

The Fish and Wildlife Service (Service) appreciates the opportunity to discuss the proposed Runway Safety Area (RSA) project proposed for the Key West International Airport (EYW). The Service will work closely with you, URS staff, Monroe County, and the Federal Aviation Administration (FAA) to achieve airfield management needs while protecting federally listed species and important saltmarsh, mangrove, and saltpond habitats. The following is a summary of questions, suggestions, and ideas, which may help you choose other available options for the project.

1. If the no action alternative were to be pursued, would the FAA continue to authorize airport operations?

2. If the project as proposed were not to be pursued, could the airport continue to provide commercial service by accommodating smaller planes that would not need the additional RSA to function within FAA regulations?

3. If larger planes could not land here due to the lack of suitable RSAs, could the FAA downgrade the EYW Airport Reference Code to reflect the current airfield design and still accommodate smaller commercial aircraft? Would this be an option for the FAA; and if not, why?

4. Will the proposed RSAs increase commercial passenger jet traffic, size of aircraft, and the size of the loads that the current planes can carry? Would the proposed RSAs allow larger jets to land in Key West?

5. Are there currently buildings or other structures in the proposed RSAs or clear zones, which would be allowed to remain?

6. While the airport cannot dictate that a certain type of plane cannot land at the airport, can the FAA regulate the size or payload of the planes that do land here? Is the FAA obligated to provide RSAs for all type of planes that want to land here?

7. Currently there is a trend for airlines to trim their fleets, restructure routes, and resize aircraft to stay competitive. Is the FAA's safety program bound by accommodating the current airline market based on plane size? If left to free market forces, could the airline industry fill the niche for Key West, even if only smaller planes are authorized to land in Key West? Is the FAA bound to the current ARC status or could they change the status to accommodate smaller planes within the current air field and existing RSAs?

8. The presence or absence of Lower Keys marsh rabbits and silver rice rats on the EYW property must be conclusively determined. URS should contact Craig Faulhaber, the current Lower Keys marsh rabbit researcher, at 305-872-9412 or 305-515-0280.

9. Explore and develop alternative options to the current proposed RSA plans. These alternative techniques should strive to avoid impacts, and when avoidance cannot be accomplished, they should strive to minimize impacts to saltmarsh, mangrove, and saltpond habitats, yet still allow the EYW to meet some FAA RSA goals.

10. Consider avoiding direct impacts to existing bodies of water and mangrove stands by incorporating these features into the RSA specifications.

11. Consider proposing the RSA project in already scarified areas around the airfield, or in areas of lesser habitat quality.

12. Consider designing the project in a way such that mangrove-dominated weltands are not filled, but are left in place to provide critical ecological functions. The mangroves could be managed by foliage trimming so as to achieve a partial goal of the RSA.

13. Consider not filling salt ponds or saltmarshes but working around these to achieve a partial RSA in areas that are currently scarified or have minimal quality wetlands.

14. Explore the option of minimizing the proposed project footprint to exclude the large impact area to the dense mangrove stand on the east end of the runway.

15. Consider shifting the runway to the west, where there are lesser impacts to mangroves, while still achieving a partial RSA, and without compromising approach runway protection zones.

16. Explore newer technologies in aircraft overshoot arresting systems, which would not directly impact wetland habitats.

17. Develop a suite of both onsite and offsite mitigation options (e.g., restoration, enhancement, exotic removal, land acquisition, etc.) after exhausting the options available for avoiding and minimizing wetland impacts.

18. Include effects of airfield operations on the protected bald eagle and its nest and fledgling. You may also want to coordinate this effort with other airports in Monroe County.

I hope these suggestions and ideas will give you greater flexibility in developing a successful project proposal. Thank you for your cooperation and effort in protecting the Florida Keys environment. If you have any questions regarding this letter, please contact Allen Webb at (772) 562-3909, extension 246, or Andrew Gude at (305) 872-5563.

Sincerely yours,

Linda S. Ferrell
Assistant Field Supervisor
South Florida Ecological Services Office

cc:
Corps of Engineers, Miami, FL (Paul Kruger)
South Florida Water Management District, West Palm Beach, FL (Anita Bain, Ron Peekstock)
Federal Aviation Administration, Orlando, FL (Virginia Lane, Bart Vernace)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

Received URS 11/26/2002

November 20, 2002

Mr. Peter M. Green
Senior Airport Environmental Planner
URS Corporation
7650 West Courtney
Campbell Causeway
Tampa, FL 33607-1462

SUBJ: Runway Safety Area Feasibility Study; Key West International Airport; Monroe County, FL

Dear Mr. Green:

Pursuant to Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the referenced feasibility study for the Key West International Airport (KWIA) prepared by URS Corporation on behalf of the Federal Aviation Administration (FAA) and the Monroe County Board of County Commissioners. This study evaluates the feasibility of extending Runway Safety Areas (RSAs) at both ends of the existing runway to meet FAA standards. Such extension would impact wetlands and other sensitive natural areas associated with the Florida Keys. Please note that we will not be able to attend the December 5, 2002, agency meeting but wish to offer the following preliminary comments and questions:

► Operational Projections - What is the basis for the projected increase in operations from 2001 to 2011 (11.8% increase) to 2020 (18.1% increase)?

► Wetlands - We note that 31 acres of wetlands (page 4 classifies wetlands as "bays and estuaries, mangrove swamp; exposed rock with marsh grasses") are predicted to be lost if the proposed project is implemented. More specifically, the proposed extension of the RSAs to meet FAA standards would impact mangroves on the eastern end (Runway 27) of the runway and open water habitat on the western end (Runway 9). This Key West Salt Ponds aquatic system provides important habitat for water fowl and wading birds and is only one of two remaining natural systems in Key West. We preliminarily agree that the 31-acre quantification is accurate and believe such acreage is substantive for a limited landscape, such as Key West.

The runway Object Free Areas (OFAs) would normally increase the cleared area beyond the RSA dimensions (to 800' x 1000' in this case), which would result in an additional 11.5 acres of cleared wetlands. However, the document suggests that FAA may elect to modify that requirement and limit the OFA to the RSA dimensions. The final document should clarify that requirement and also depict the wetlands located within the 800' x 1000' dimensions in Figure 4.1-1. If the 11.5 acres are cleared, EPA would consider the wetland losses for this proposal to be 42.5 acres

(31 ac + 11.5 ac). Although not grubbed, the 11.5 acres are included in the wetland loss total due to the loss of habitat values incurred through clearing.

▸ Alternatives - Alternatives to expand RSAs appear to be limited on either end of the runway. Since the present document is a feasibility study, various options should still be explored and disclosed in the final document. We also note that page 4 indicates that FAA Order 5200.8 states that: *When making determinations about the practicability of obtaining the RSA, the first attempt shall consist of investigating fully the possibility of obtaining an RSA that meets the current standards through a traditional graded area surrounding the runway.* It is unclear if there are any FAA exemptions or modifications to FAA Order 5200.8 for sensitive natural areas (e.g., are there any *non-traditional* options to grading the area to avoid or minimize losses to sensitive natural areas?). The final document should discuss this. Such options and exemptions, however, should not compromise airport runway safety.

▸ Mitigation - If the project is pursued and given that alternatives to avoid sensitive natural areas appear limited and FAA exemptions unclear, mitigation must be considered. EPA suggests that any such mitigation be greater than 1:1 and be provided onsite, or at least in the lower Florida Keys. However, we are not aware of sites large enough for such mitigation in the Keys. What type of mitigation and at what sites would the airport Sponsor offer to compensate for losses to mangroves, Key West Salt Ponds and other lost/affected resources due to the proposal?

In summary, EPA has concerns with the proposed project due to the quantity and quality of the wetlands and other natural resources that would be lost on either end of the KWIA runway. As a feasibility study, various options should still be explored and disclosed in the final document that would not compromise airport runway safety. If the proposal is pursued, mitigation for wetlands and Key West Salt Ponds should be coordinated with the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service and EPA.

We were pleased to provide these early review comments on the feasibility study and request a copy of the final document. Should you have questions regarding these comments, please contact Chris Hoberg (404/562-9619) of ~~my staff for overall questions or Dr. William~~ Kruczynski (305/743-0537) in Marathon, Florida of the EPA Region 4 Water Management Division regarding specific wetland questions.

Sincerely,

H Mueller

Heinz J. Mueller, Chief
Office of Environmental Assessment
Environmental Accountability Division

cc: Virginia Lane: FAA - Orlando, FL
Jackie Sweatt-Essick: FAA - Atlanta, GA

AGENCY COMMENTS
RUNWAY SAFETY AREA FEASIBILITY STUDY
KEY WEST INTERNATIONAL AIRPORT

The following comments were provided to URS Corporation in response to a meeting held at the South Florida Water Management District office on October 9, 2002. The purpose of the meeting was to present and explain the proposed Runway Safety Area (RSA) project and initiate discussion regarding conceptual mitigation strategies. The FAA and Monroe County are preparing a study to identify the environmental issues and probable cost of mitigation related to the implementation of a standard RSA at the Key West International Airport.

COMMENT NO.	AGENCY	COMMENT	RESPONSE
1.	USACOE E-mail dated 10/10/2002	The project's stated purpose was to bring the airport into compliance with FAA regulations. Please state this purpose and any other secondary purposes or benefits associated with project including; current passenger capacity, anticipated increases in take offs and landings, change in aircraft types and the relation of this to potential secondary and cumulative impacts to the aquatic environment . This includes connections to vessels which may mean more ship traffic in the KW harbor.	The purpose of the proposed project is to improve passenger and aircraft safety at the Key West International Airport (KWIA). The proposed project will provide a standard Runway Safety Area (RSA) in accordance with FAA requirements as required in Federal Aviation Regulations, Part 139, *Certification and Operations: Land Airports Serving Certain Air Carriers* and as specified in FAA Advisory Circular 150/5300-13 *Airport Design.* Excerpts from these were provided in the information package distributed at the October 9, 2002 meeting. Aircraft historically have overrun the ends of runways. These accidents have resulted in destruction of aircraft and resulted in loss of life. In order to minimize the hazards of overruns, the FAA incorporated into airport design the concept of a safety area beyond the runway end. The RSA must be capable of supporting an aircraft that overruns the runway while minimizing structural damage to the aircraft or injury to passengers. Besides enhancing safety for aircraft and passengers, the runway safety area also provides greater accessibility for emergency vehicles if aircraft overshoot the runway. The proposed RSA improvement project at the KWIA is required for current airport operations, regardless of any activity increase or potential future airport improvements. The RSA project will not induce demand, increase capacity, or alter the operational characteristics of the airport. The project is safety-based for the current aircraft mix using the airport. In regards to airport activity, the FAA Terminal Area Forecast projects an increase in passenger enplanements and aircraft operations at the Key West International Airport (KWIA), with or without, the proposed RSA project.

AGENCY COMMENTS
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KEY WEST INTERNATIONAL AIRPORT

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2.	USACOE E-mail dated 10/10/2002	Please identify the encroachments into the FAA clear zone (private buildings which the applicant does not intend to have removed) by location and name of owner. Please state why these obstructions would be allowed to remain.	No objects have yet been identified, or otherwise proposed, to remain in place within the Runway Object Free Area (OFA). On a case-by-case basis, the FAA will consider requests for Modification to Standards for Object Free Areas as long as the airport sponsor can prove that the proposed modification provides an acceptable level of safety. However, the FAA does not consider, under any circumstances, modification of RSA standards. Guidance on this topic was recently provided by the Federal Aviation Administration in Change 7 to Advisory Circular 150/5300-13 *Airport Design*. The change, dated October 1, 2002 states the following: "RSA standards cannot be modified or waived like other airport design standards. The dimensional standards remain in effect regardless of the presence of natural or man-made objects or surface conditions that might create a hazard to aircraft that would leave the runway surface." The Advisory Circular continues: "A continuous evaluation of all practicable alternatives for improving each sub-standard RSA is required until it meets all standards for grade, compaction, and object frangibility."
3.	USACOE E-mail dated 10/10/2002	Please discuss Engineer Materials Arresting Systems to slow aircraft over shoots and describe why or why not these might be used in combination with a minimized project to achieve a similar safety factor.	The FAA must evaluate and make a determination of the practicability of providing a standard RSA. If it is not practicable to construct a standard RSA, the FAA then looks at other alternatives to provide additional RSA. EMAS may be an option considered along with other alternatives; however, the system may or may not be feasible at every airport location based on installation, maintenance, and repair costs.
4.	USACOE E-mail dated 10/10/2002	(I believe) URS & FAA said the clear zone (in length) would remain the same if smaller planes were used. Please document this statement.	The comment was meant to illustrate the fact that eliminating a particular aircraft would not automatically reduce the length of the RSA. This is an important consideration since many regional carriers are converting their fleets to regional jets in lieu of turboprops. This conversion to regional jets is evidenced by the change in the commercial fleet mix at the KWIA. Airport design criteria is based on the airport's critical aircraft, which is the most demanding aircraft having at least 500 annual operations at the airport. The regional jets aircraft serving the KWIA fall into the C and D